

## **Mathematical literacy (數學能力)**

is an individual's capacity to identify and understand the role that mathematics plays in the world, to make well-founded mathematical judgements and to engage in mathematics, in ways that meet the needs of that individual's current and future life as a constructive, concerned and reflective citizen.

### **Major aspects:**

mathematical competencies  
mathematical big ideas

### **Minor aspects:**

mathematical curricular strands  
situations and contexts

## **Mathematical competencies**

1. mathematical thinking skill
2. mathematical argumentation skill
3. modelling skill
4. problem posing and solving skill
5. representation skill
6. symbolic, formal and technical skill
7. communication skill
8. aids and tools skill

## **Competency classes**

Class 1: reproduction, definitions, and computations

Class 2: connections and integration for problem solving

Class 3: mathematisation. mathematical

thinking,  
generalisation and insight

## Mathematical big ideas

1. chance
2. change and growth (\*)
3. space and shape (\*)
4. quantitative reasoning
5. uncertainty
6. dependency and relationships

(\*) to be assessed in the current test

## Mathematical curricular strands

1. number
2. measurement
3. estimation
4. algebra
5. functions
6. geometry
7. probability
8. statistics
9. discrete mathematics

## Situations and contexts

Private life (daily life), school life, work and sports, the local community and society as encountered in daily life, and scientific contexts

Tasks based on "authentic" contexts which are likely to occur in real-world setting